

INDIVIDUAL WATER SUPPLY WELLS

The South Carolina Department of Health and Environmental Control's (DHEC) Bureau of Water has published this pamphlet to assist the well driller and consumer in understanding the "hows and whys" of well construction. This pamphlet describes important water well construction regulations and standards and emphasizes the importance of selecting a certified well driller to construct the well. The well owner or driller has to obtain a permit from DHEC before installing the well.

Regulations and standards for construction of water wells are detailed in South Carolina Regulations R.61-71. These regulations were established by DHEC to protect the public against well and aquifer contamination due to improper well construction. Permitting requirements are contained in R.61-44.

These construction standards also apply to heat pump production/return flow wells and sprinkler system wells. The permitting requirements apply to individual drinking water and irrigation wells.

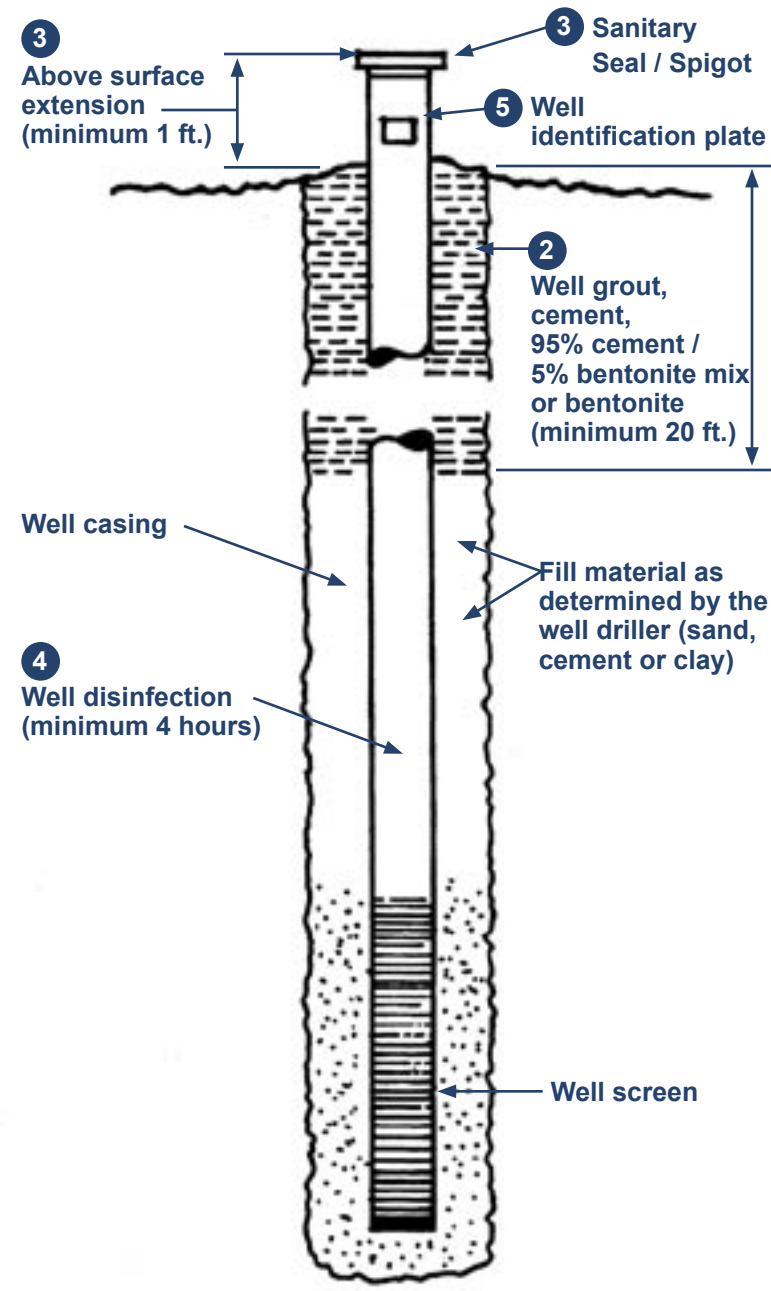
A certified well driller is required to install the well. The regulations require that the State of South Carolina certify all water well drillers operating in South Carolina. The driller's certification indicates to the consumer that the driller has demonstrated a thorough working knowledge of well drilling and that the water well can be expected to conform to established standards.

The following paragraphs describe several regulatory requirements necessary to meet important health related water well construction standards. If any of these standards are not followed the integrity and dependability of the well may be severely reduced.

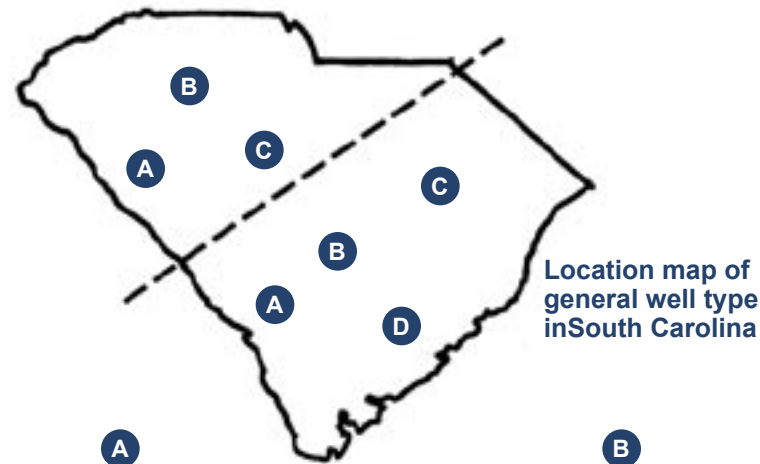
1 Proper well location – The regulations require the completed water supply well be located no closer than 50 feet from surface water bodies, barns, or a septic tank or its tile field, 5 feet from buildings and property lines, or 100 feet from any other potential source of contamination. The well driller may suggest an increased distance from a potential contamination source.

- 2** Well grouting – The regulations require the water well to have cement, cement/bentonite or bentonite grout from the ground surface down to a minimum depth of 20 feet. Grouting around the casing is done to seal the open space between the well casing and the drill hole wall. This seal is to prevent potential contaminants from entering the well by seeping down along the outside of the well casing. The minimum grouting required may occasionally be insufficient for this purpose. In such cases, a conscientious, experienced well driller will recommend the grout extend beyond the 20-foot minimum depth.
- 3** Sanitary seals – Regulations require the well extend a minimum of one foot above ground level to the top of the casing to prevent rainwater runoff from flowing into the well. The cover on the wellhead should be attached in such a manner that it is not easily removable. A sampling spigot should also be located on the wellhead. Examine the seal periodically to ensure that it is in good condition and has not deteriorated.
- 4** Disinfection – The well must be disinfected upon completion. Disinfectant should remain in the well for a minimum of four hours before being flushed from the well. The disinfecting process is done to kill harmful bacteria. Household chlorine bleach is commonly used as a disinfectant. Calcium hypochlorite (HTH) or sodium hypochlorite (Perchloron) can also be used.
- 5** Well identification – The regulations require that the well have an attached plate that identifies the well and includes the company name and certification number of the driller who installed the well, the date the well was completed, total well depth, and casing depth. This information will be extremely valuable if the well requires any modification or repair.
- 6** Reporting – A water well construction record (DHEC 1903 form) must be submitted by the well driller to DHEC within 30 days of well completion. Owners are advised to secure a copy of the completed form for their records.

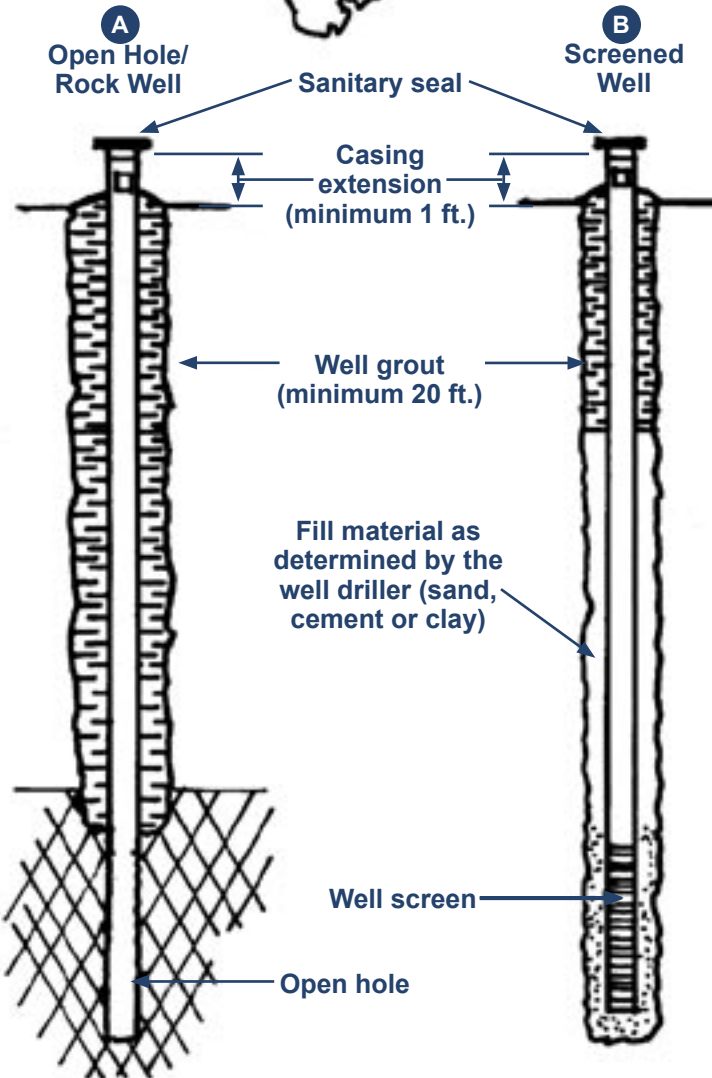
GENERAL WELL REFERENCE



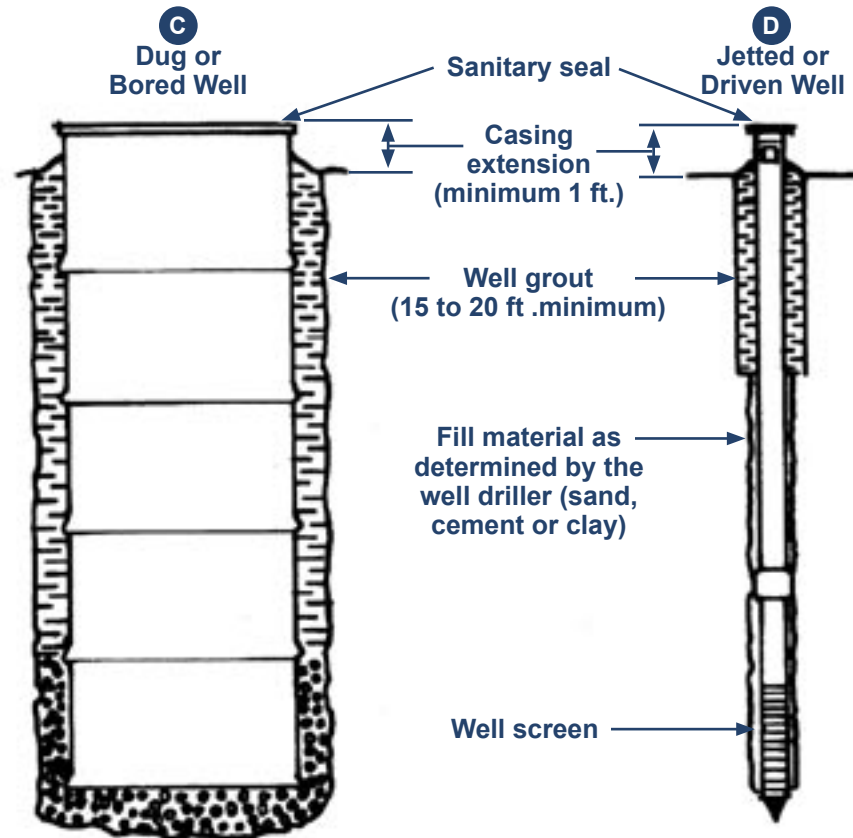
- 1** Nearest septic tank / tile field 50 feet or more, etc.
- 6** Report well within 30 days of completion.



Location map of
general well type
in South Carolina



There are four types of wells typically found in South Carolina. In the northwestern portion of South Carolina, (A) open hole/rock wells, (B) screened wells, and (C) dug wells predominate. In the southeastern portion of the state, (A) open hole/rock wells, (B) screen wells, (C) dug wells and (D) jetted/driven wells can be found. The general construction details are shown in the accompanying illustrations.



If you have any questions about the construction of your well, or about the water quality (taste, staining, bacteria) contact SCDHEC's Private Well Program at (toll-free) 1-888-761-5989.



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individual water supply wells